

What is claimed is:

1. A finisher comprising:

a feeder that conveys a sheet in a first direction and a second direction that is the opposite direction from the first direction along a conveyance path;

a detector that detects the sheet being conveyed;

a sheet folding unit that creates a fold line in the sheet;

a controller that controls the feeder and the sheet folding unit, and executes:

1) an operation in which the sheet is conveyed in the first direction, and after a downstream edge thereof relative to the first direction is detected by the detector during conveyance, the sheet is conveyed in the second direction,

2) an operation in which after such sheet edge is detected by the detector during conveyance in the second direction, the conveyance of the sheet in the second direction is continued for a prescribed amount based on a sheet length along a direction of conveyance, whereupon the sheet is stopped, and

3) an operation in which after the sheet is stopped, the sheet folding unit is operated to create a fold line at a prescribed position in the sheet;

a sheet accumulator that accumulates sheets in which the fold line has been created while aligning them by the edge to create a packet of sheets; and

a stapler that places staples into the sheet packet formed by the sheet accumulator.

2. A finisher of claim 1, wherein the prescribed amount is set such that a distance between the above sheet edge and the prescribed position at which a fold line should be created is half of the sheet length along the direction of conveyance.

3. A finisher of claim 1, wherein the controller controls the feeder and the stapler such that the staples are placed into the fold line of the sheet packet.

4. A finisher comprising:

a feeder that conveys a sheet in a first direction and a second direction that is the opposite direction from the first direction along a conveyance path;

a sheet folding unit that creates a fold line in the sheet;

a controller that controls the feeder and the sheet folding unit and executes:

1) an operation in which the sheet is conveyed in the first direction, and is then stopped when a downstream edge thereof relative to the first direction is at a prescribed position along the conveyance path,

2) an operation in which, after the sheet is stopped, the sheet is conveyed in the second direction by a prescribed amount based on a sheet length along a direction of conveyance and stopped, and

3) an operation in which, after the sheet is stopped for the second time, the sheet folding unit is operated to create a fold line at a prescribed position on the sheet;

a sheet accumulator that accumulates sheets in which the fold line has been created while aligning them along the above edge to create a packet of sheets; and

a stapler that places staples into the sheet packet formed by the sheet accumulator.

5. A finisher of claim 4, wherein the prescribed amount is set such that a distance between the above sheet edge and the prescribed position at which a fold line should be created is half of the sheet length along the direction of conveyance.

6. A finisher of claim 4, wherein the controller controls the feeder and the stapler such that the staples are placed into the fold line of the sheet packet.

7. A finisher comprising:

a feeder that conveys a sheet in a prescribed direction along a conveyance path;

a measuring unit that measures a length of the sheet along a direction of conveyance;

a detector that detects the sheet being conveyed;

a sheet folding unit that creates a fold line in the sheet;

a controller that controls the feeder and the sheet folding unit and executes:

1) an operation in which the sheet is conveyed in the prescribed direction, and after an upstream edge thereof relative to the prescribed direction is detected by the detector, the conveyance of the sheet in the prescribed direction is continued for a prescribed amount based on the sheet length along the direction of conveyance, whereupon the sheet is stopped, and

2) an operation in which, after the sheet is stopped, the sheet folding unit is operated to create a fold line at a prescribed position of the sheet;

a sheet accumulator that accumulates sheets in which the fold line has been created while aligning them using an edge opposite from the above edge to create a packet of sheets; and

a stapler that places staples into the sheet packet formed by the sheet accumulator.

8. A finisher of claim 7, wherein the prescribed amount is set such that a distance between the edge opposite from the above sheet edge and the prescribed position at which a fold line should be created is half of the sheet length along the direction of conveyance.

9. A finisher of claim 7, wherein the controller controls the feeder and the stapler such that the staples are placed into the fold line of the sheet packet.

10. A sheet processing method comprising:

1) conveying a sheet in a first direction along a conveyance path;

2) detecting a downstream edge of the sheet relative to the first direction by a detector during sheet conveyance in the first direction;

3) conveying the sheet in a second direction opposite from the first direction after the downstream edge of the sheet is detected;

4) detecting the downstream edge of the sheet by the detector during sheet conveyance in the second direction;

5) continuing the sheet conveyance in the second direction for a prescribed amount based on a sheet length along a direction of conveyance after the downstream edge of the sheet is detected, whereupon the sheet is stopped;

6) creating a fold line at a prescribed position in the sheet after the sheet is stopped;

7) accumulating sheets in which the fold line has been created while aligning them by the edge to create a packet of sheets; and

8) placing staples into the sheet packet.

11. A sheet processing method of claim 10, wherein the prescribed amount is set such that a distance between the above sheet edge and the prescribed position at which a fold line should be created is half of the sheet length along the direction of conveyance.

12. A sheet processing method of claim 10, wherein the staples are placed into the fold line of the sheet packet.

13. A sheet processing method comprising:

- 1) conveying a sheet in a first direction along a conveyance path;
- 2) stopping the sheet when a downstream edge thereof relative to the first direction is at a prescribed position along the conveyance path,
- 3) after the sheet is stopped, conveying the sheet in a second direction opposite from the first direction by a prescribed amount based on a sheet length along a direction of conveyance and stopping the sheet;
- 4) after the sheet is stopped for the second time, creating a fold line at a prescribed position on the sheet;
- 5) accumulating sheets in which the fold line has been created while aligning them along the above edge to create a packet of sheets; and
- 6) placing staples into the sheet packet.

14. A sheet processing method of claim 13, wherein the prescribed amount is set such that a distance between the above sheet edge and the prescribed position at which a fold line should be created is half of the sheet length along the direction of conveyance.

15. A sheet processing method of claim 13, wherein the staples are placed into the fold line of the sheet packet.

16. A sheet processing method comprising:

- 1) conveying a sheet in a prescribed direction along a conveyance path;
- 2) detecting an upstream edge of the sheet relative to the prescribed direction ;

3) continuing the conveyance of the sheet in the prescribed direction for a prescribed amount based on a sheet length along a direction of conveyance after the upstream edge of the sheet is detected, whereupon the sheet is stopped;

4) creating a fold line at a prescribed position of the sheet after the sheet is stopped;

5) accumulating sheets in which the fold line has been created while aligning them using an edge opposite from the above edge to create a packet of sheets; and

6) placing staples into the sheet packet formed by the sheet accumulator.

17. A sheet processing method of claim 16, wherein the prescribed amount is set such that a distance between the edge opposite from the above sheet edge and the prescribed position at which a fold line should be created is half of the sheet length along the direction of conveyance.

18. A sheet processing method of claim 16, wherein the staples are placed into the fold line of the sheet packet.